PCG-FXA63

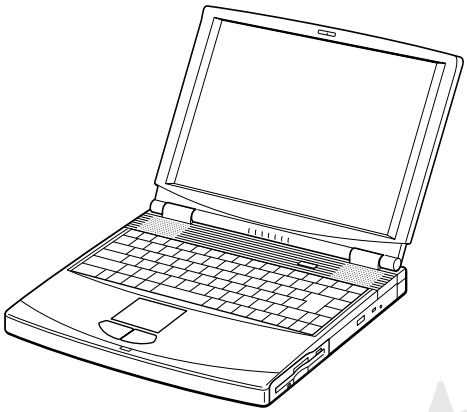
SERVICE MANUAL

For American Area

US Model
CanadianModel

Ver 2-2003L

Revision History



i™ S400

VAIO

Lineup : PCG-FXA63

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NOTEBOOK COMPUTER

SONY®

9-874-586-02

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Caution Markings for Lithium/Ion Battery - The following or similar texts shall be provided on battery pack of equipment or in both the operating and the service instructions.

CAUTION: Danger of explosion if battery is incorrectly replaced. Replace only with the same or equivalent type recommended by the manufacturer. Discard used batteries according to the manufacturer's instructions.

CAUTION: The battery pack used in this device may present a fire or chemical burn hazard if mistreated. Do not disassemble, heat above 100°C (212°F) or incinerate.
Dispose of used battery promptly.
Keep away from children.

CAUTION: Changing the back up battery.

- Overcharging, short circuiting, reverse charging, multilation or incineration of the cells must be avoided to prevent one or more of the following occurrences; release of toxic materials, release of hydrogen and/or oxygen gas, rise in surface temperature.
- If a cell has leaked or vented, it should be replaced immediately while avoiding to touch it without any protection.

Service and Inspection Precautions

1. Obey precautionary markings and instructions

Labels and stamps on the cabinet, chassis, and components identify areas requiring special precautions. Be sure to observe these precautions, as well as all precautions listed in the operating manual and other associated documents.

2. Use designated parts only

The set's components possess important safety characteristics, such as noncombustibility and the ability to tolerate large voltages. Be sure that replacement parts possess the same safety characteristics as the originals. Also remember that the ⚠ mark, which appears in circuit diagrams and parts lists, denotes components that have particularly important safety functions; be extra sure to use only the designated components.

3. Always follow the original design when mounting parts and routing wires

The original layout includes various safety features, such as inclusion of insulating materials (tubes and tape) and the mounting of parts above the printer board. In addition, internal wiring has been routed and clamped so as to keep it away from hot or high-voltage parts. When mounting parts or routing wires, therefore, be sure to duplicate the original layout.

4. Inspect after completing service

After servicing, inspect to make sure that all screws, components, and wiring have been returned to their original condition. Also check the area around the repair location to ensure that repair work has caused no damage, and confirm safety.

5. When replacing chip components...

Never reuse components. Also remember that the negative side of tantalum capacitors is easily damaged by heat.

6. When handling flexible print boards...

- The temperature of the soldering-iron tip should be about 270C.
- Do not apply the tip more than three times to the same pattern.
- Handle patterns with care; never apply force.

Caution: Remember that hard disk drives are easily damaged by vibration. Always handle with care.

ATTENTION AU COMPOSANT AYANT RAPPORT À LA SÉCURITÉ!

LES COMPOSANTS IDENTIFÉS PAR UNE MARQUE ⚠ SUR LES DIAGRAMMES SCHÉMATIQUES ET LA LISTE DES PIÈCES SONT CRITIQUES POUR LA SÉCURITÉ DE FONCTIONNEMENT. NE REMPLACER CES COMPOSANTS QUE PAR DES PIÈSES SONY DONT LES NUMÉROS SONT DONNÉS DANS CE MANUEL OU DANS LES SUPPÉMENTS PUBLIÉS PAR SONY.

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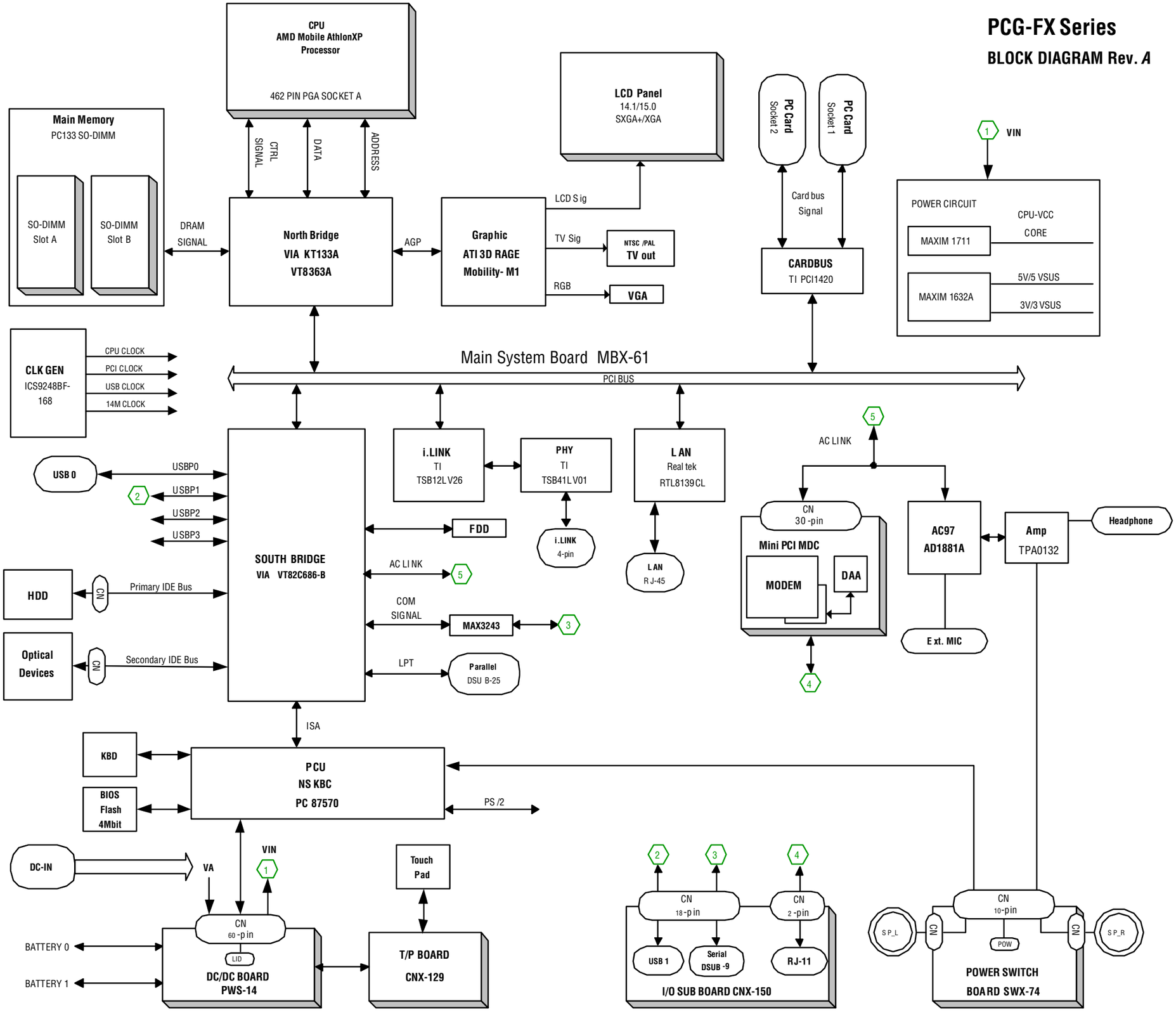
History of the changes is shown as the "Revision History" at the end of this data.

CHAPTER 1.
BLOCK DIAGRAM



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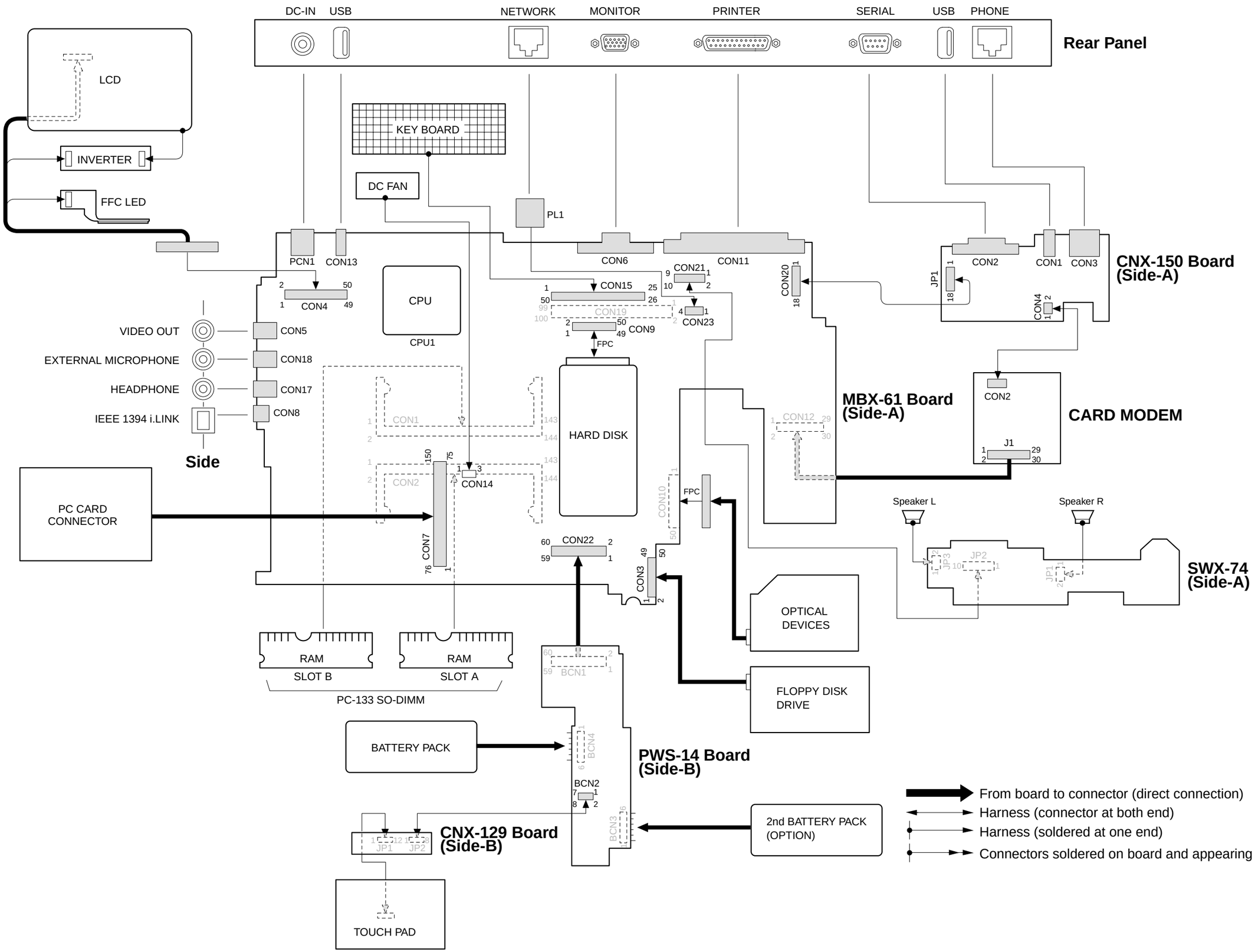
CHAPTER 2.

FRAME HARNESS DIAGRAM



CHAPTER 3.
EXPLODED VIEWS AND PARTS LIST

NOTE:

- Items marked " * " are not stocked since they are seldom required for routine service. Some delay should be anticipated when ordering these items.
- The mechanical parts with no reference number in the exploded views are not supplied.
- When two or more parts are shown in parallel, use the part described first as the main part.
- The parts marked " $ " are the High Value Modules.
- The parts marked " # " are the parts on which barcode label is attached.
- The indication [CH] is used for identification of part type.
- Regarding the boards of this model, the discrete parts on the boards cannot be replaced. However, Some connectors can be replaced.

The components identified by mark ⚠ or dotted line with mark ⚠ are critical for safety. Replace only with part number specified.
Les composants identifiés par une marque ⚠ sont critiques pour la sécurité. Ne les remplacer que par une pièce portant le numéro spécifié.

【使用上の注意】

- * 印の部品は常備在庫しておりません。
- 図面番号のない部品は供給しません。
- 併記部品の場合，上部記載部品をメイン部品として使用してください。
- 部品名称の前に $ 印のついた部品は，High Value Module です。
- 商品名称の前に # 印のついた部品は，バーコードラベル貼付部品です。
- [CH]の表記は部品管理上の識別です。
- 本モデルの基板については，基板上の各部品の修理は行うことができません。ただし，一部のコネクタについては，修理可能です。

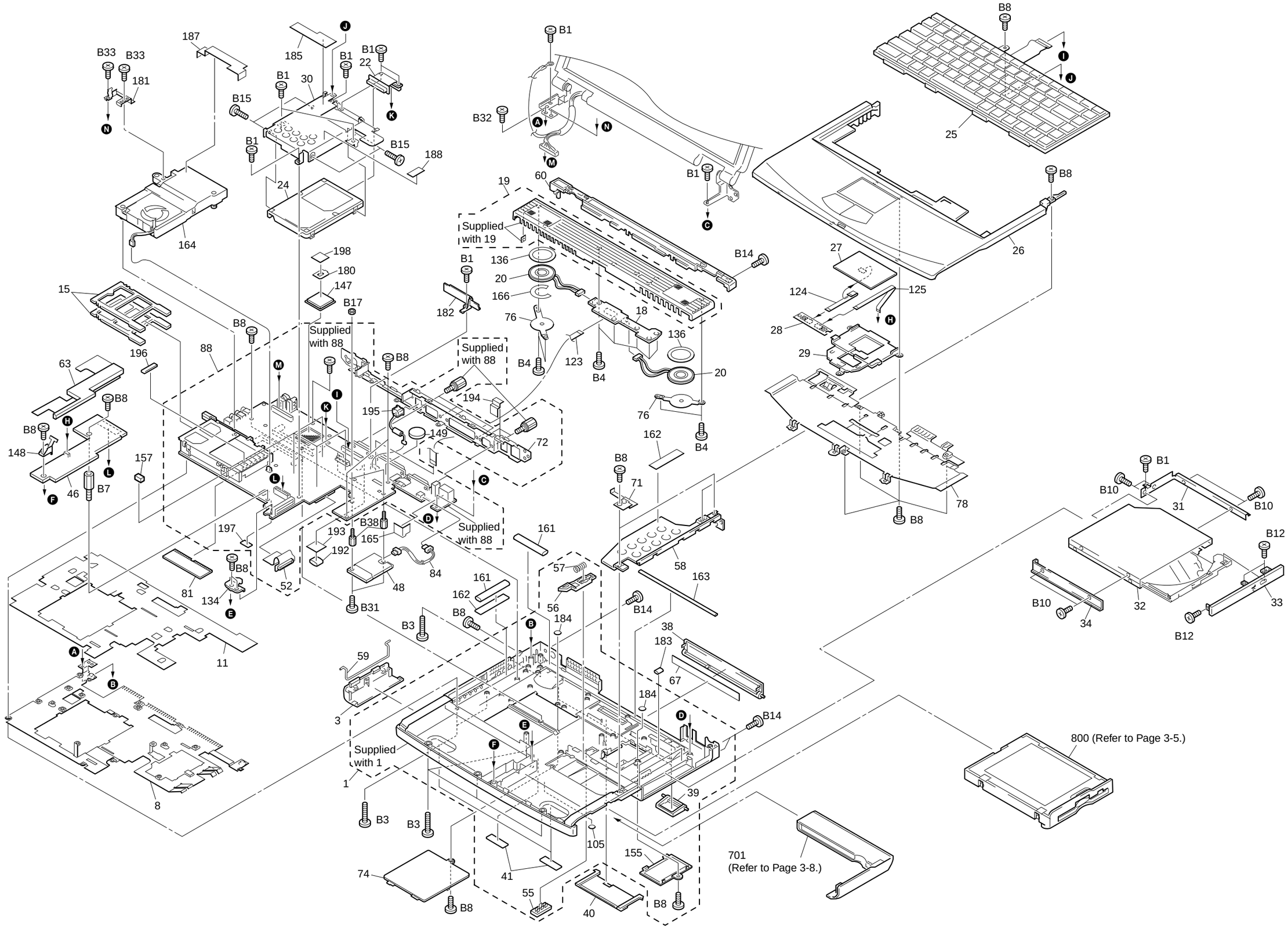
⚠印の部品，または⚠印付きの点線で囲まれた部品は，安全性を維持するために重要な部品です。従って交換時は，必ず指定の部品を使用してください。

3-1. Main Section

Ref.No.	Part No.		Description
1	X-4623-848-3		[CH]...ASSY BOTTOM (Q)
3	4-640-837-22		DOOR BATTERY
* 8	4-651-706-01		HEATSINK BOTTOM
11	4-656-752-01		[CH]...INSULATOR HEATSINK BOTTOM
15	4-643-832-21		DUMMY CARD
18	A-8049-276-A	$	COMPLETE PWB SWX-74
19	X-4623-850-2		[CH]...ASSY HOOD KEYBOARD (Q)
20	1-529-287-11		SPEAKER UNIT
22	1-790-639-22		FPC 50PIN (FOR HDD)
24	A-8059-138-A	$ #	ASSY HDD 20GB (H,20) (S)
25	1-476-647-12	$ #	KEY BOARD UNIT (US)
26	X-4623-849-3		[CH]...ASSY PALMREST (Q)
27	1-772-529-72		PAD, TOUCH
28	A-8049-275-A	$	COMPLETE PWB CNX-129
* 29	4-651-699-01		BRACKET PAD
* 30	4-651-708-12		BRACKET (HDD)
31	4-640-861-04		BRACKET CD-ROM R
32	1-796-455-11	$ #	COMBO DRIVE (UJDA730)
33	X-4623-436-2		ASSY DOOR DVD-RW (PA)
* 34	4-640-860-03		BRACKET (CD-ROM L)
38	4-656-727-01		[CH]...DOOR I/O
39	4-656-735-01		[CH]...FOOT REAR
40	4-651-714-01		DOOR DOCKING CONNECTOR
41	4-656-736-01		[CH]...FOOT FRONT
46	A-8067-735-A	$	COMPLETE PWB PWS-14 (U)
48	1-761-380-23	#	CARD, MODEM
52	1-790-640-11		FPC 50PIN (FOR CD-ROM)
55	4-640-845-11		BUTTON BAY
56	4-644-349-01		LATCH BAY
* 57	4-640-854-01		SPRING BAY
* 58	4-651-850-01		BRACKET BOTTOM
* 59	4-640-857-01		DOOR BATTERY SPRING
60	4-651-698-01		DISPLAY BASE
63	4-651-928-02		COVER BATTERY CONNECTOR
67	4-656-756-01		[CH]...LABEL I/O
* 71	4-641-851-02		SPRING (FDD), PLATE
72	4-657-283-01		[CH]...BRACKET IO
74	4-651-702-01		DOOR DIMM
* 76	4-644-361-01		BRACKET SPK
* 78	4-644-362-11		PLATE PALMREST
81	6-600-118-01		IC MT8LSDT3264HG-133B1 (PC-133 SO-DIMM (256MB CL3))
81	6-600-114-01		IC HYS64V32220GDL-7.5-C2 (PC-133 SO-DIMM (256MB CL3))
84	1-960-827-21		HARNESS (2 PIN)
88	A-8111-213-A	$ #	BOARD ASSY, MAIN
105	4-641-630-11		COVER BAY HOLE
123	1-790-711-21		FFC (PPK)
124	1-757-767-11		FFC (TP-CNX)
125	1-790-710-11		FFC (SWX-PWS)
* 134	4-645-433-01		BRACKET BAY CONNECTOR
136	4-644-357-01		CUSHION SPK
147	6-702-710-01		IC AXMS1600FWS3B (Athlon XP 1600+)
148	X-4623-561-2		ASSY LATCH DETECTOR
149	1-756-148-11		SECONDARY BATTERY, LITHIUM
155	4-651-701-11		DOOR MODEM
157	4-654-701-01		CUSHION (HD-M2)

Ref.No.	Part No.		Description
161	4-654-019-01		GASKET (AV)
162	4-654-047-01		SHIELD (AV)
163	4-653-936-01		GASKET (HB/M)
164	A-8112-265-A	$	COOLING UNIT-3A
165	4-644-667-01		COVER RJ-11
166	4-654-631-01		GUARD SPK
180	4-663-824-01		TAPE CPU (A-XP)
* 181	4-654-398-01		PLATE GROUND (SH)
182	4-657-164-03		BRACKET WIRE 2
183	4-655-511-01		GASCKET (DRIVE)
184	4-654-776-01		INSULATOR (SCREW)
185	4-654-783-01		SHIELD TAPE (HDD)
187	4-658-711-01		SHIELD TAPE (FAN)2
188	4-658-542-01		SPACER (KEY BOARD)
192	4-658-470-01		[CH]...GASKET (DOCK)
193	4-659-640-01		TAPE (DOCK) J
194	4-659-641-01		SHIELD TAPE (USB) 2J
195	9-885-020-01		[CH]...CABLE ASSY (RJ-45-CONN)
196	4-653-151-01		SPACER (KBF)
197	4-664-390-01		TAPE M/B J
198	4-668-785-01		THERMAL SHEET CPU
B1	4-641-726-41		SCREW (M2), SPECIAL HEAD
B3	4-644-899-01		SCREW (M2), 0 NUMBER P3 KIND
B4	4-639-112-01		SCREW M2X4
B7	4-644-402-12		SCREW (MBX)
B8	4-641-726-12		SCREW (M2), SPECIAL HEAD
B10	4-652-498-01		+B M2 (NOJI)
B12	4-645-177-01		SCREW (M1.7X3.5)
B14	4-645-497-01		SCREW (M2.6), CROSS (HOLE) BIND
B15	4-635-301-01		SCREW M3X4
B17	7-622-205-05		NUT M2 TYPE2
B31	4-645-214-11		GRIP, M2
B32	7-621-772-68		SCREW +B 2X12
B33	4-642-852-21		+B M2
B38	4-651-989-01		SPACER (MBX)
800	————————		Refer to section “3-2.FDD Section”

NOTE :
When replacing the CPU, refer to “4-1. Replacing the CPU”.



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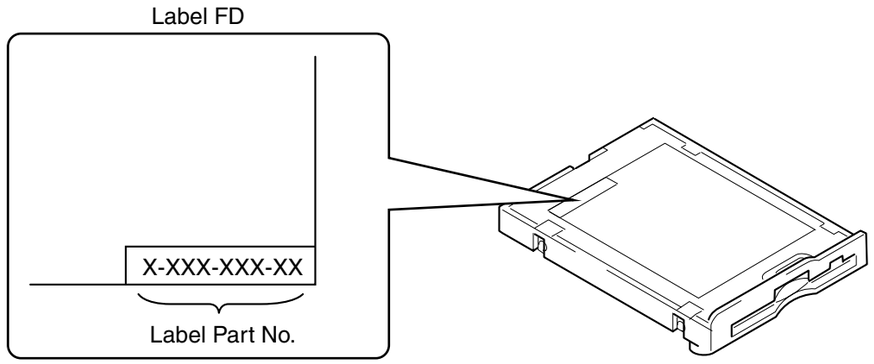
3-2. FDD Section

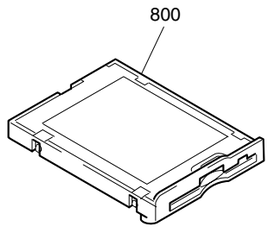
How to use properly the FDD repair parts.

Types of service to be provided are different depending on the part No. of the FDD in use.



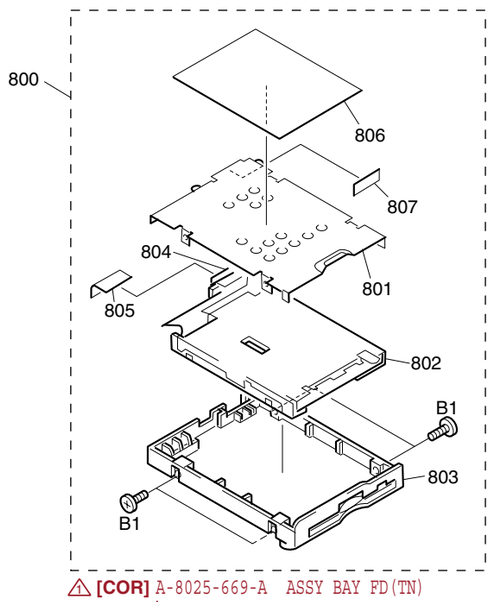
The service types are shown below depending on the part No. that is printed in the bottom right of the FD label.

[Label Part No. : 4-656-805-0*]



Ref.No.	Part No.	Description
800	A-8025-674-A $ #	FDD UNIT ASSY (TN-CH)

[Label Part No. : 4-641-763-3*]

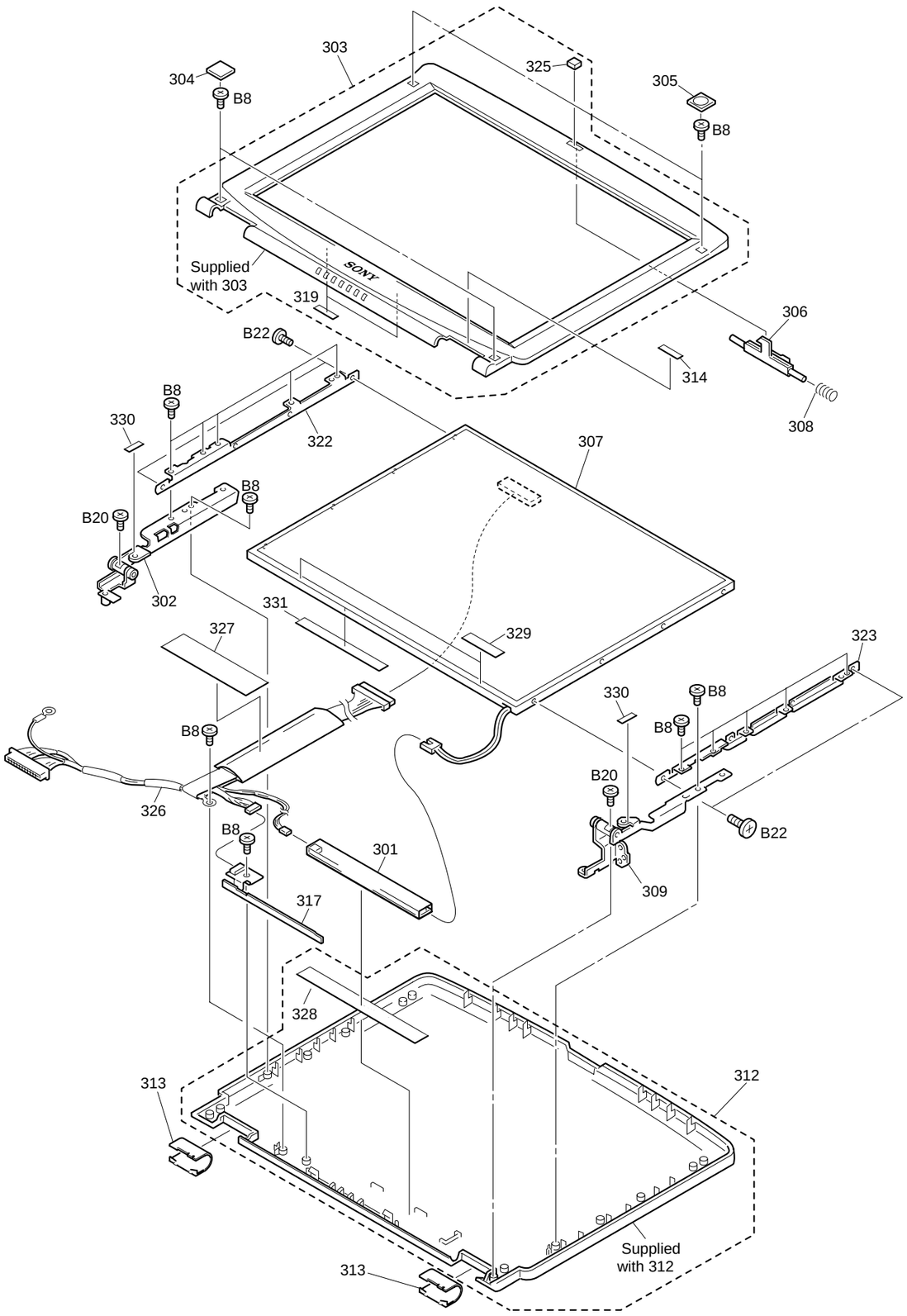


⚠ **[COR]** A-8025-669-A ASSY BAY FD(TN)

Ref.No.	Part No.	Description
800	~~A-8048-966-A~~	~~ASSY BAY FD (TE)~~
801	4-640-828-01	PLATE FDD
802	1-796-231-11 $ #	FDD (FD-07-7760)
803	X-4623-835-1	ASSY BOTTOM FDD Z (TCY3)
804	1-790-641-11	FPC 50PIN (FOR FDD)
805	4-641-629-01	INSULATOR FDD
806	4-641-763-31	LABEL FD
807	4-644-053-01	SPACER FDD
B1	4-646-807-01	0 PLATE M2.5 (FDD)

MEMO

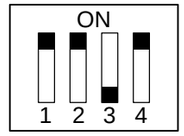
3-3. LCD Section – Made by AU –



Ref.No.	Part No.	Description
301	1-476-318-21	INVERTER UNIT
302	X-4623-378-1	HINGE LEFT MV
303	X-4623-409-3	ASSY HOU, BEZEL 14SA-Z
304	4-635-277-22	COVER SCREW LOWER
305	4-635-276-22	COVER SCREW UPPER
306	4-637-902-31	LATCH
307	A-8067-426-A $ #	ASSY (LCD)(XGA)(14AU)(COG)(S)
308	4-637-903-01	SPRING LATCH
309	X-4623-379-1	HINGE RIGHT MV
312	X-4623-458-1	ASSY HOU, DISPLAY 14FV-Z
313	4-642-762-31	COVER HINGE (15)
314	4-666-883-11	LABEL, MODEL NUMBER (U)
317	1-757-605-11	PWB, FLEXIBLE PRINT (SINGLE)
319	4-654-966-01	SHEET (BEZEL), ADHESIVE
* 322	4-644-163-11	BRACKET LCD LEFT 14 (SA)
* 323	4-644-164-11	BRACKET LCD RIGHT 14 (SA)
325	4-642-760-12	CUSHION CENTER
326	1-961-018-81	HARNESS, LCD (XGA-F-N)
327	4-650-831-01	SHIELD TAPE (SK)
328	4-645-219-01	LCD TAPE 13.3
329	4-665-934-01	TAPE LCD2
330	4-665-931-01	SPACER LCD
331	4-668-388-01	CUSHION LCD
B8	4-641-726-12	SCREW (M2), SPECIAL HEAD
B20	7-628-254-00	SCREW +PS 2.6X5
B22	4-658-316-01	ACE (M2), +B LOCK

NOTE :

Set the DIP switch on the MBX-61 board (Main board) to match with the LCD (A-8067-426-A) that is used in this computer.



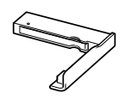
The upper position where ON indication is shown is the ON position . The lower position is the OFF position.

No.	1	2	3	4
ON/OFF	0	0	1	0

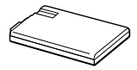
0 : ON 1: OFF

Ref.No.	Part No.	Description
		ACCESSORIES
		**********
701	A-8048-965-A	ASSY WEIGHT SAVER (Z) (Refer to Page 3-4.)
⚠702	1-476-342-41 $	ADAPTOR, AC
703	A-8110-712-A $ #	BP71A SNT (U) ASSY (S)
704	1-575-875-51	CORD, CONNECTION
⚠	1-757-562-21	CORD, POWER
	4-668-029-01	QUICK START,2540U

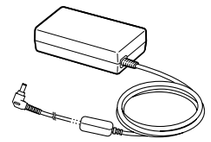
701
Weight saver (1)



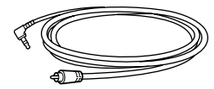
703
Battery pack (1)



702
AC adaptor (1)

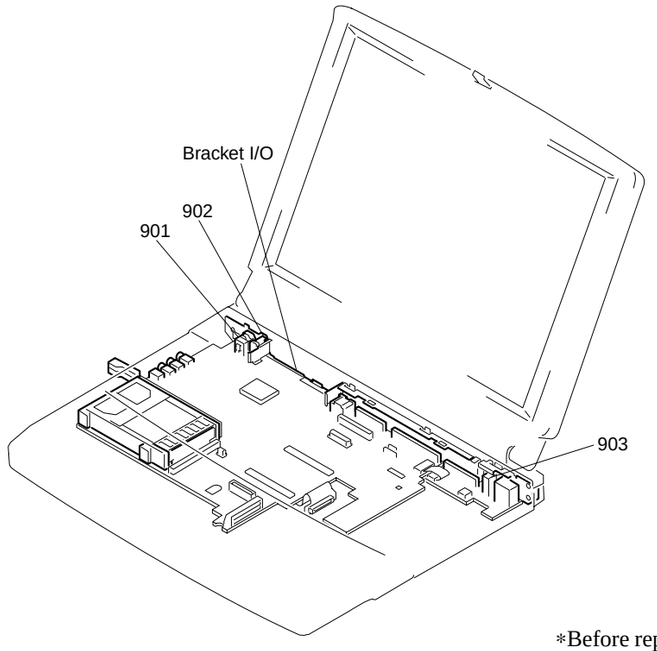


704
Video cable (1)

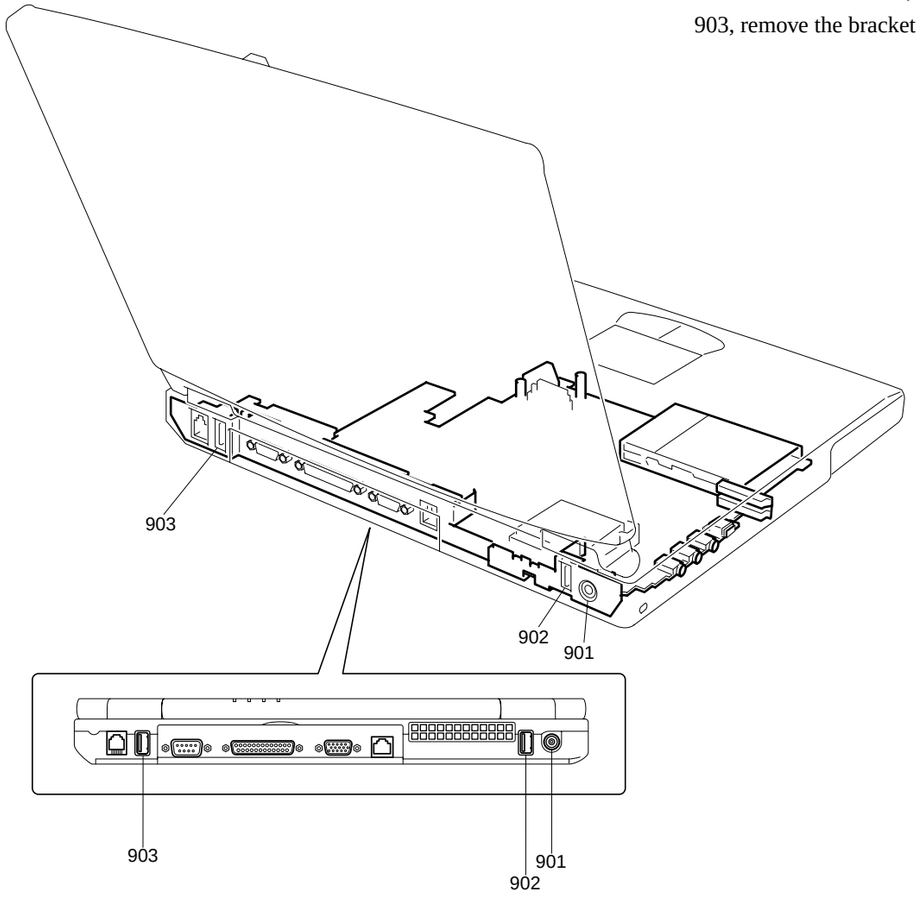


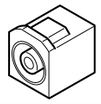
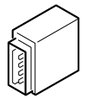
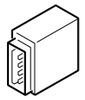
The components identified by mark ⚠ or dotted line with mark ⚠ are critical for safety. Replace only with part number specified.	Les composants identifiés par une marque ⚠ sont critiques pour la sécurité. Ne les remplacer que par une pièce portant le numéro spécifié.

3-4. Connector Section (CH Type only)



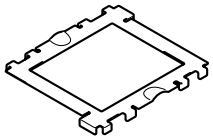
∗Before replacing the connector of reference number 901, 902 and 903, remove the bracket I/O.



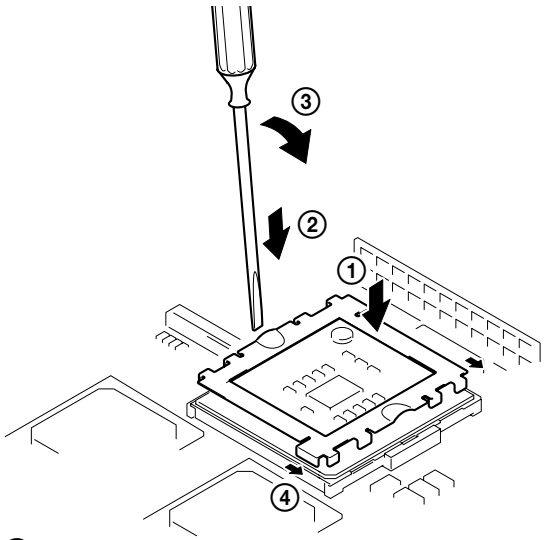
Ref.No.	Fig.	Part No.	Description
901		1-779-745-21	[CH]...JACK, DC DC IN connector
902		9-885-018-97	[CH]...CONNECTOR (1.2MM), USB USB connector
903		9-885-018-98	[CH]...CONNECTOR (1.6MM), USB USB connector

∗ Among the parts that are used on the boards of this model, only the connectors that are show in the list can be replaced.
(The parts other that the specified connectors cannot be replaced.)

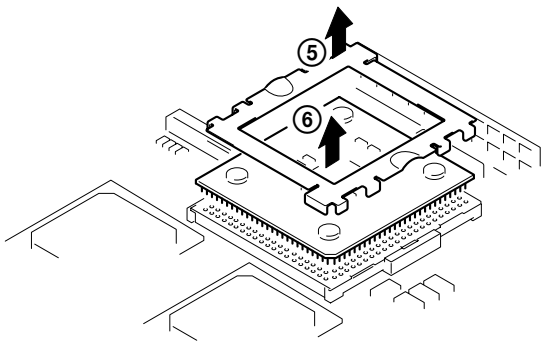
4-1. Replacing the CPU

Fig.	Part No.	Description
	J-2507-309-1	JIG FOR CPU

1. Removing the CPU



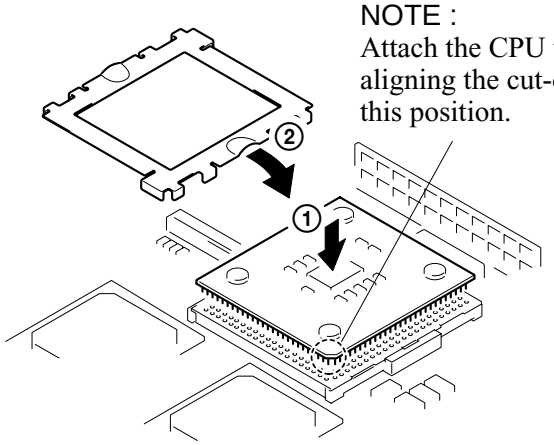
① Install the special tool in the CPU.
② Insert a flat head (-) screwdriver tip into the groove as shown.
③ While holding the special tool, slant the screwdriver in the direction of the arrow.
④ The base under the CPU moves slightly in the direction of the arrow and the CPU lock is released.



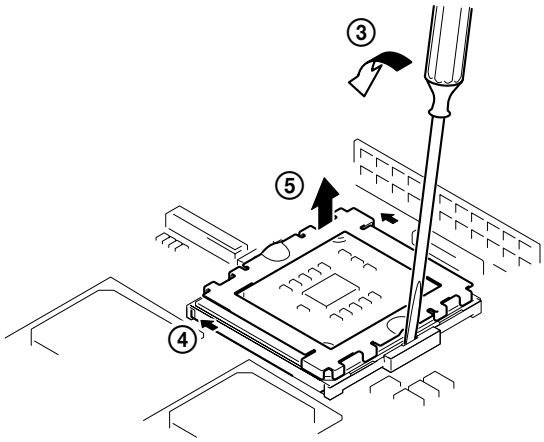
⑤ Remove the special tool.
⑥ The CPU can be removed upward.

2. Installing the CPU

NOTE :
Attach the CPU while aligning the cut-out with this position.



① Insert all pins of the replacement CPU into the holes of the base and push the CPU in the direction of the arrow.
② Install the special tool in the CPU.



③ Insert a flat head (-) screwdriver tip into the groove as shown.
While holding the special tool, slant the screwdriver it in the direction of the arrow.
④ The base under the CPU moves slightly in the direction of the arrow and the CPU is locked.
⑤ Remove the special tool.

NOTE :
- Do not use screwdrivers having a large tip than the width of the groove. Otherwise, it may cause the groove to be damaged.
- When installing the special tool in the CPU, align the convex of the base.

List of PCG-FX Series (As of December, 2003)

Model Name	Service Manual Part No.
PCG-FX190 PCG-FX170 PCG-FX150 PCG-FX140 PCG-FX120	9-872-179-XX
PCG-FX190K PCG-FX170K PCG-FX150K PCG-FX140K PCG-FX120K	9-872-194-XX
PCG-FX290K PCG-FX290	9-874-409-XX
PCG-FX270K PCG-FX270 PCG-FX250K PCG-FX250 PCG-FX240K PCG-FX240 PCG-FX220K PCG-FX220	9-874-427-XX
PCG-FX876 PCG-FX776	9-874-428-XX
PCG-FX210	9-874-404-XX
PCG-FX215	9-874-432-XX
PCG-FX390 PCG-FX370 PCG-FX340 PCG-FX390K PCG-FX370K PCG-FX340K PCG-FX390P PCG-FX370P PCG-FX340P PCG-FX310P PCG-FX310K PCG-FX310	9-874-495-XX

Model Name	Service Manual Part No.
PCG-FXA36 PCG-FXA33 PCG-FXA32	9-874-453-XX
PCG-FX410	9-874-505-XX
PCG-FXA49 PCG-FXA47 PCG-FXA48	9-874-507-XX
PCG-FXA678	9-874-509-XX
PCG-FXA53 PCG-FXA59	9-874-549-XX
PCG-FXA63	9-874-586-XX

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English
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-01	Ver. 1	2002.08.30	First Edition	
-02	Ver.2	2003.11.25	⚠1 **Page 3-5**	N2003_107CK

< Remarks >